

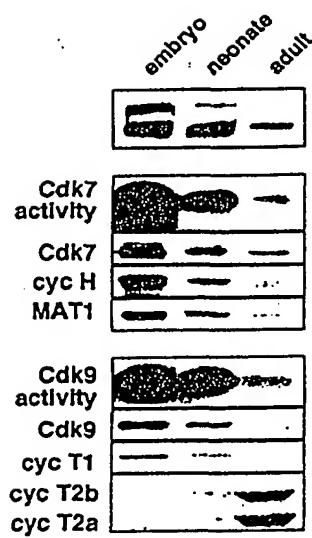
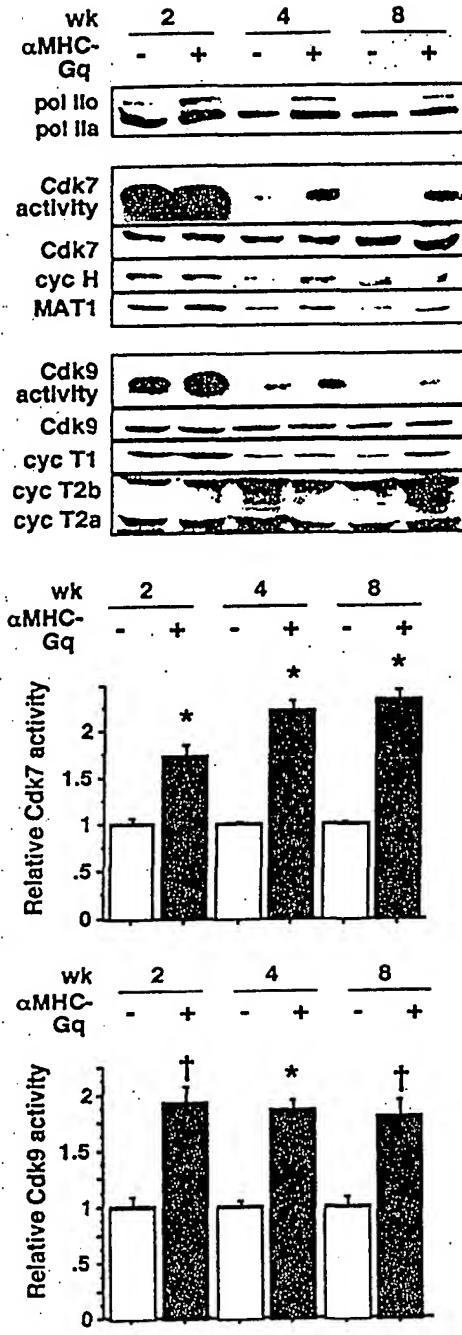
**A****B**

FIG. 1

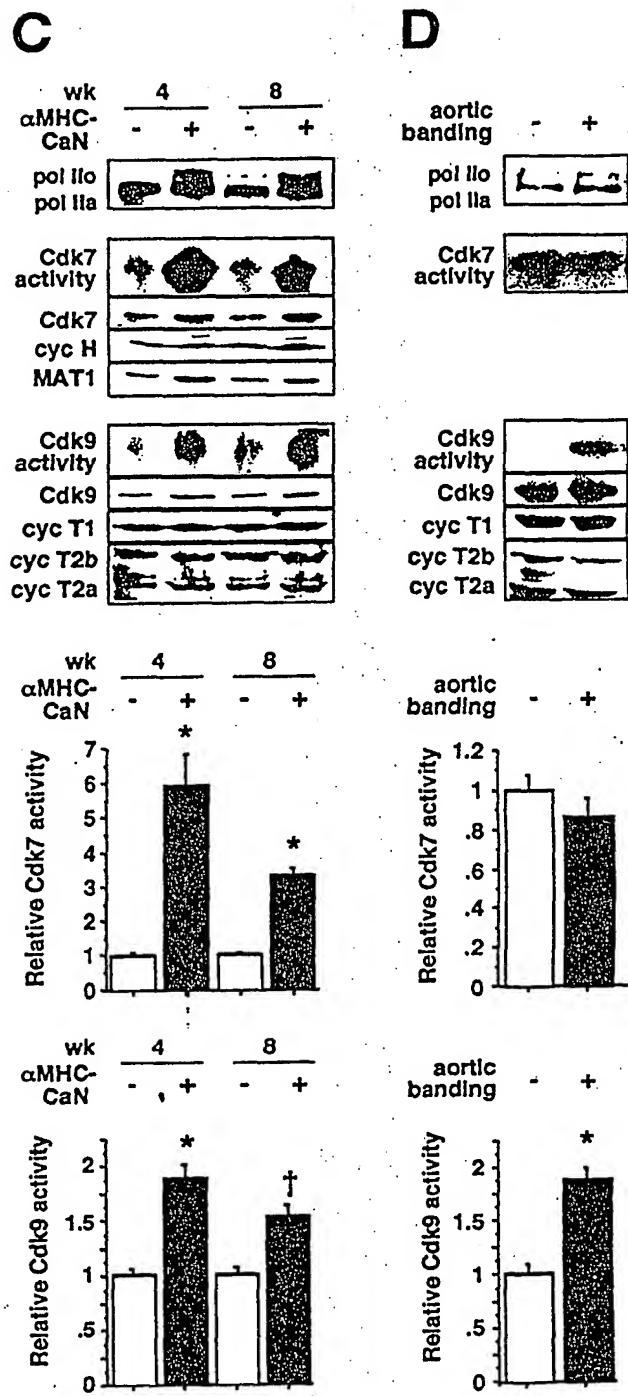


FIG. 1

3/15

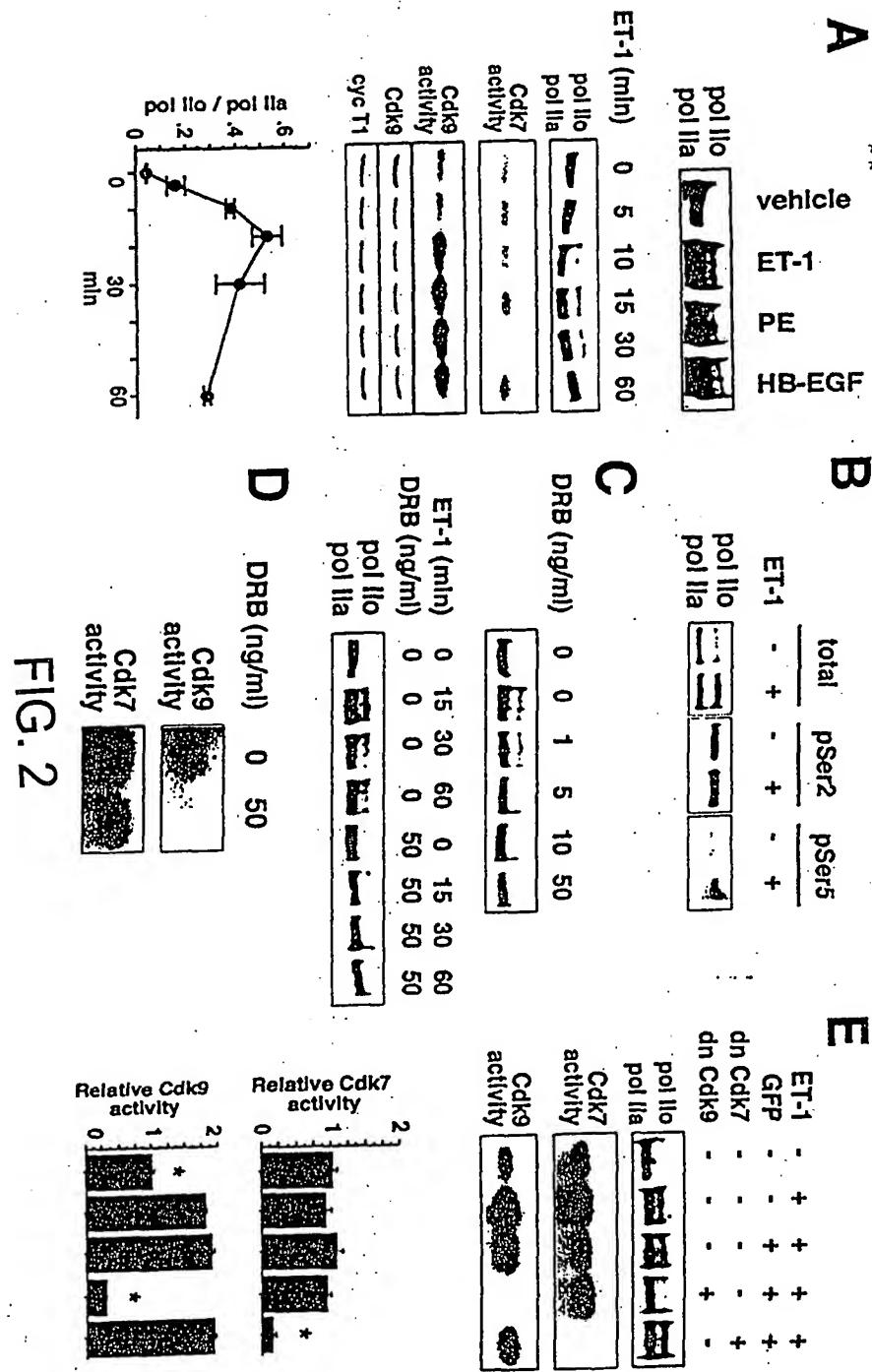


FIG. 2

4/15

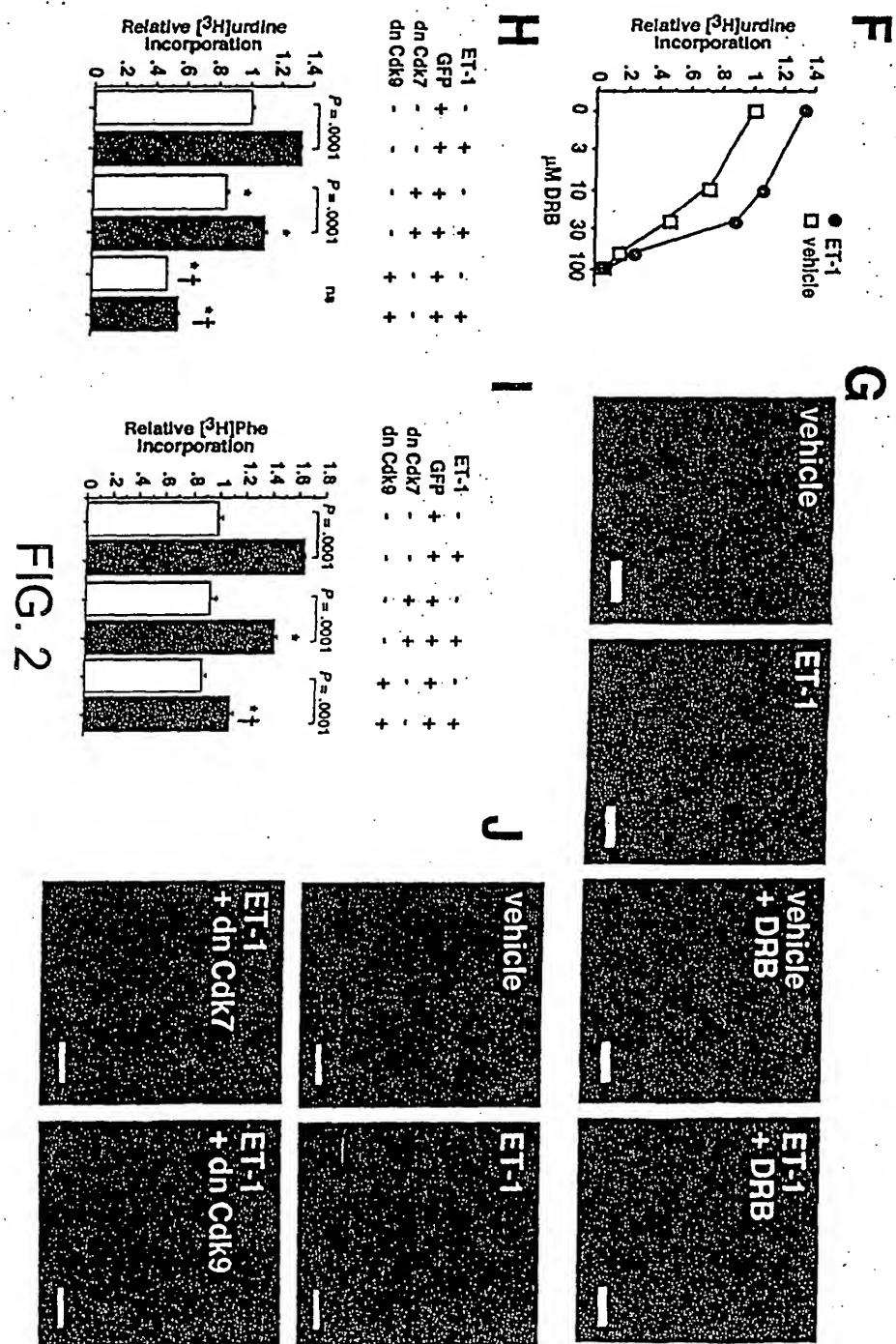


FIG. 2

5/15

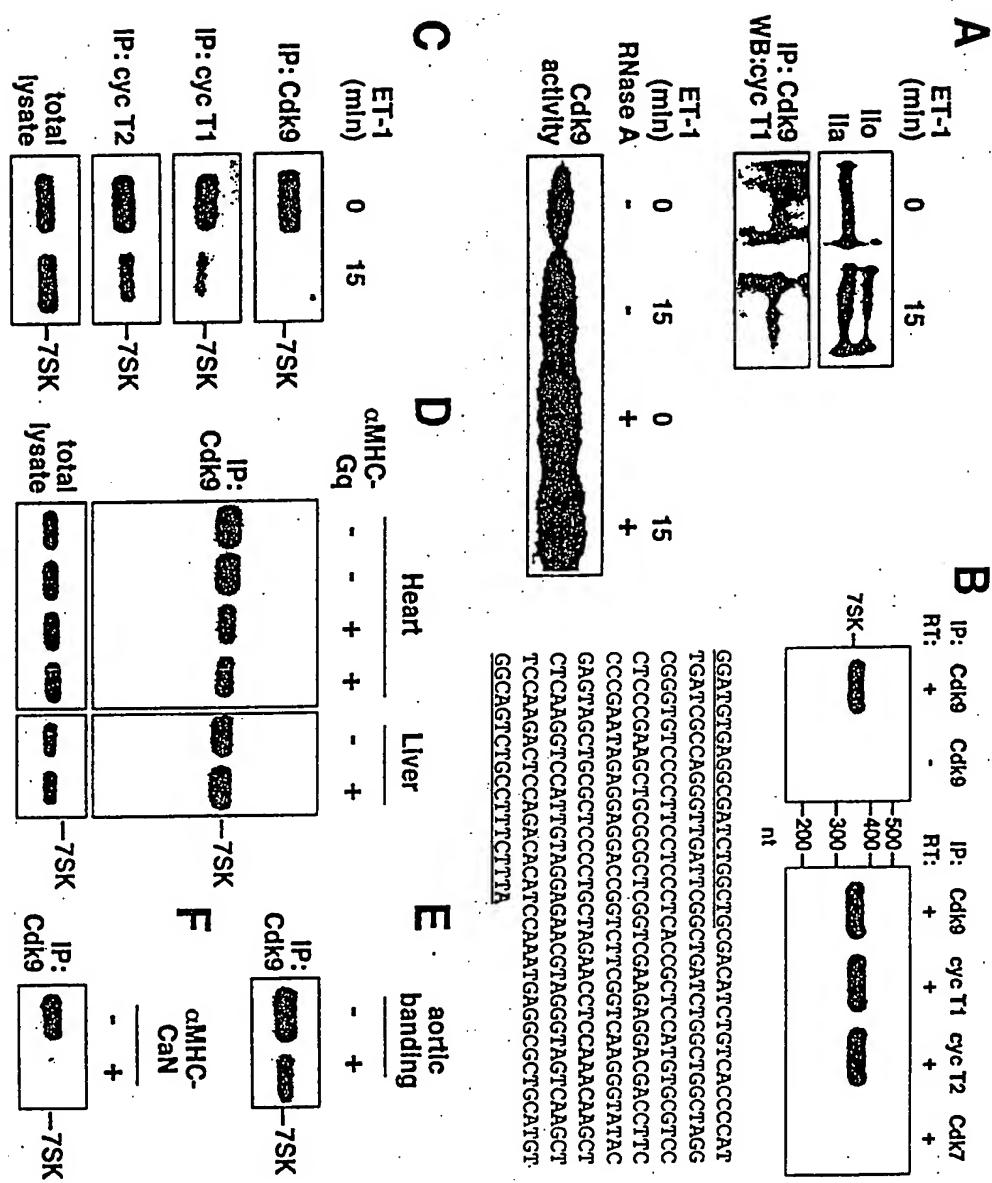


FIG. 3

6/15

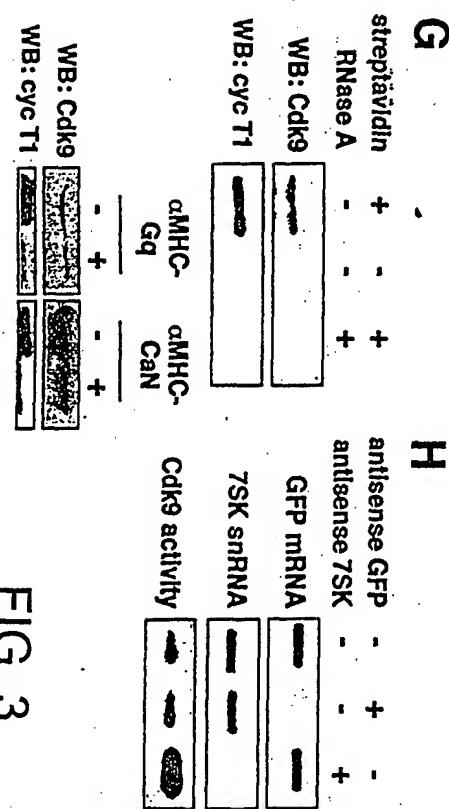
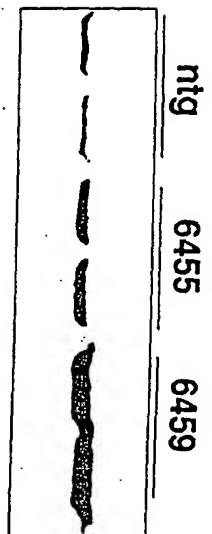


FIG. 3

7/15

**A cyclin T1 protein**



**B Cdk9 activity**

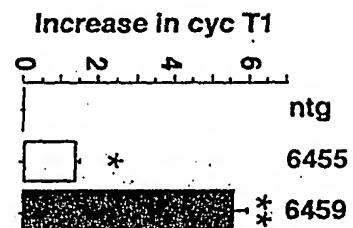
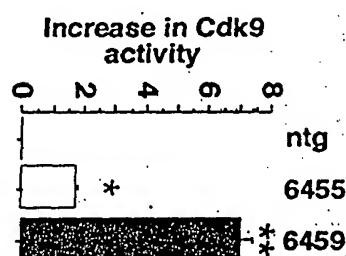
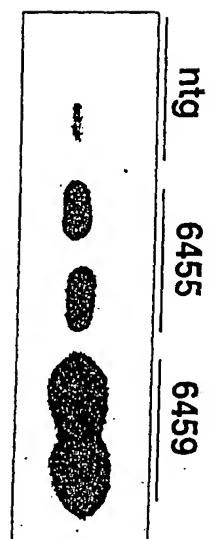
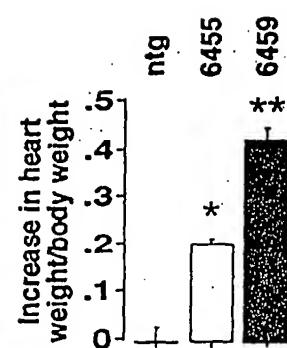
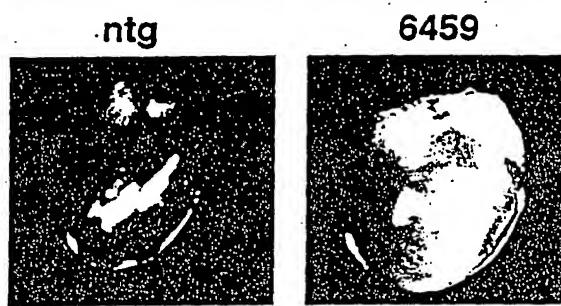


FIG. 4

8/15

**C heart size**



**D myocyte size**

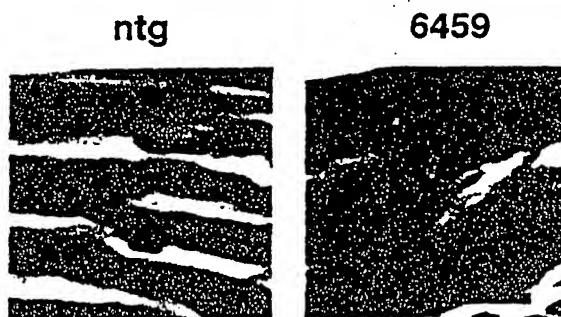


FIG. 4

9/15

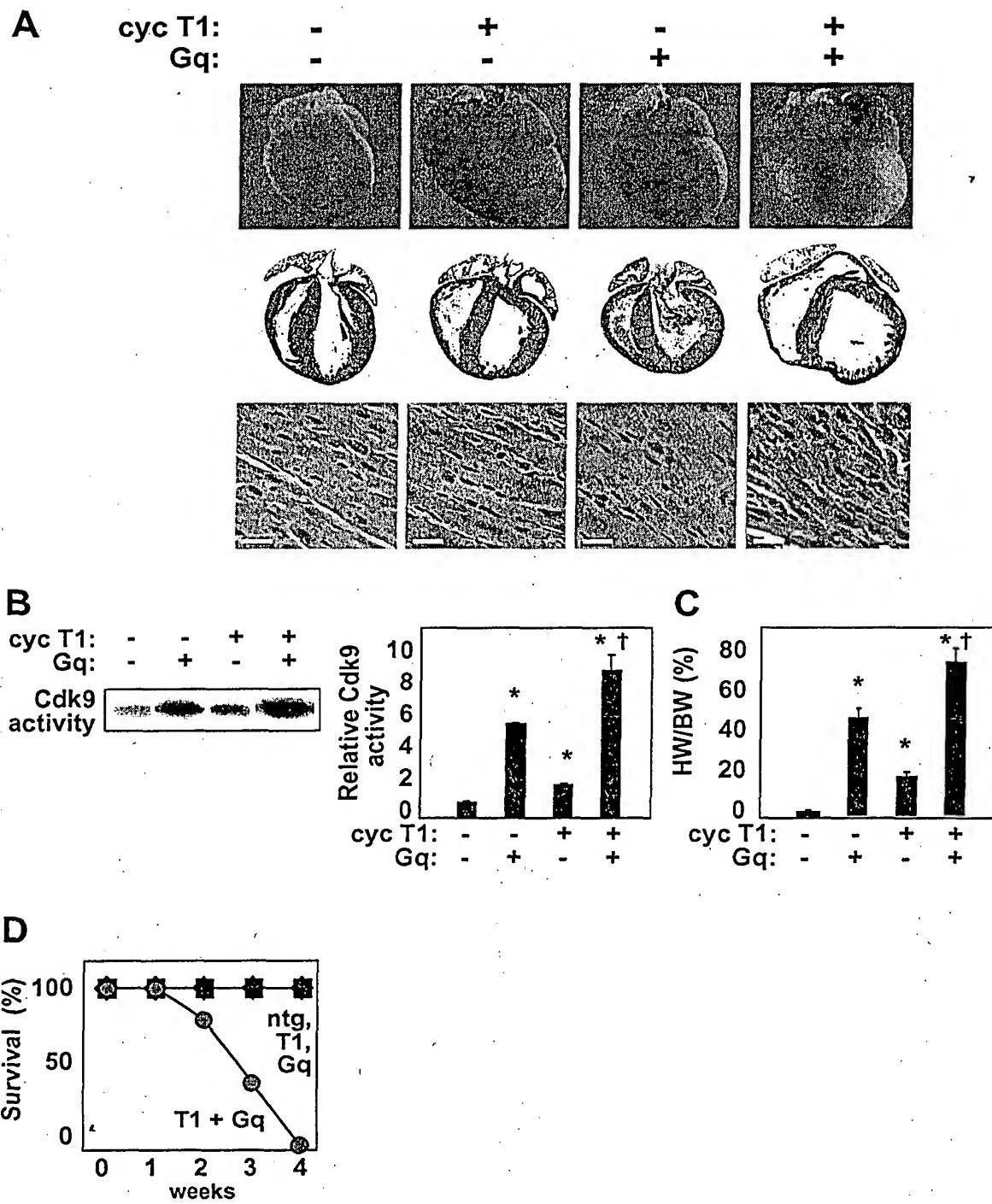


FIG. 5

10/15

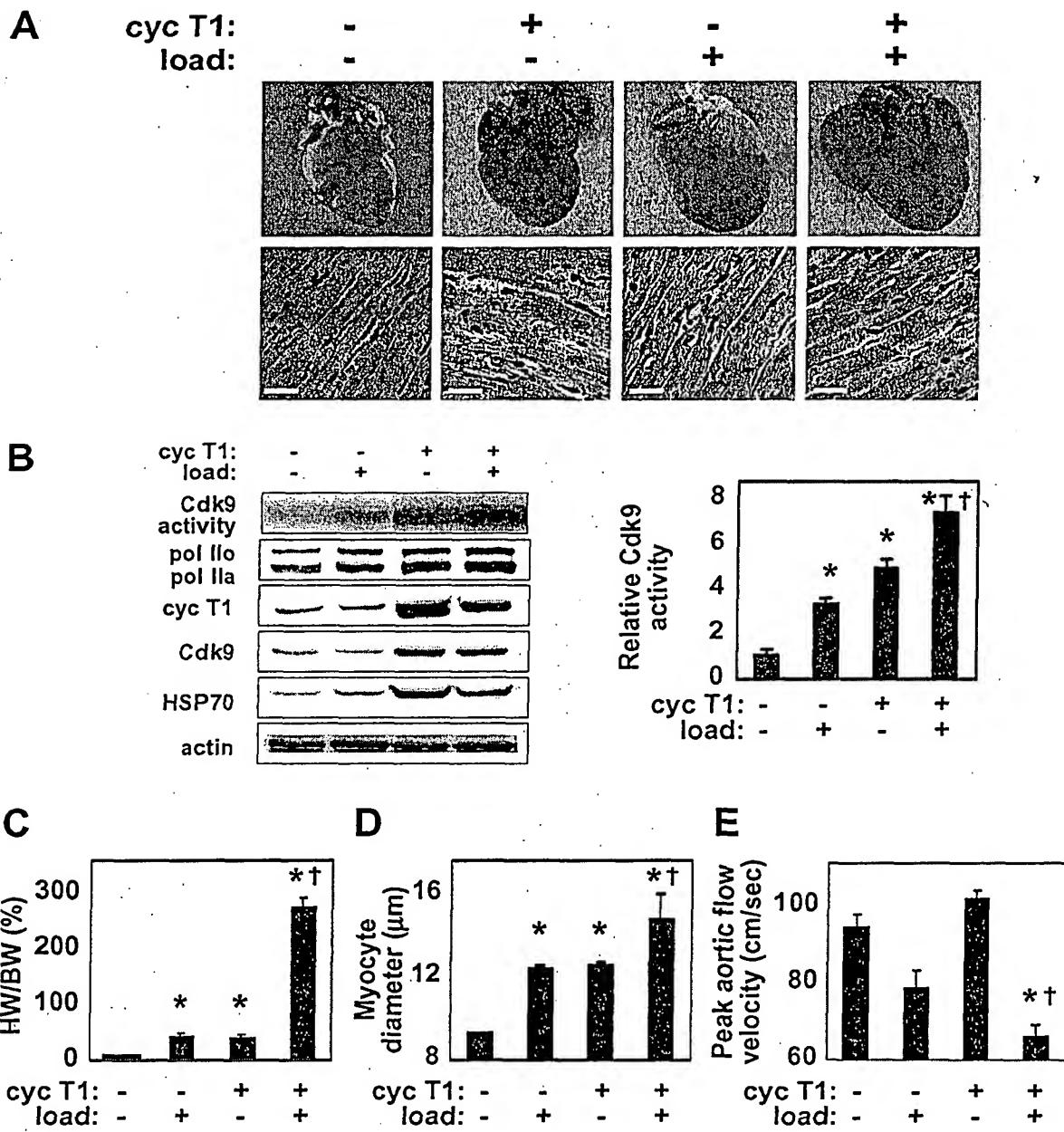
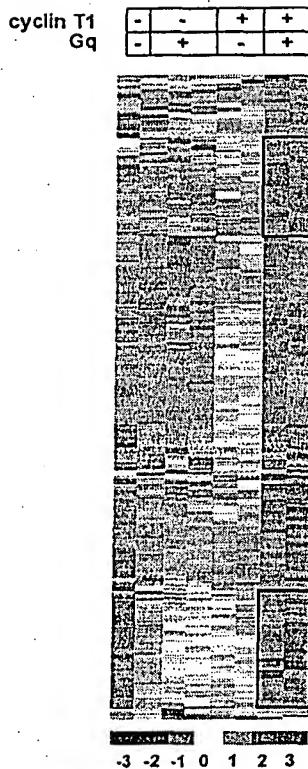


FIG. 6



-3 -2 -1 0 1 2 3

## INDUCED SYNERGISTICALLY BY CYCLIN T1 + GQ:

26S proteasome-associated pad1 homolog  
aldehyde dehydrogenase family 1, subfamily A1  
annexins A1, A3  
BCL2/adenovirus E1B 19 kDa-interacting protein 1, NIP3  
casein kinase 1, δ  
CD44 antigen  
ceruloplasmin  
chloride intracellular channel 4 (mitochondrial)  
connective tissue growth factor  
cytochrome P450, 1b1, benz[a]anthracene inducible  
cytokine receptor-like factor 1  
DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 3  
DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 50  
dual specificity phosphatase 6  
elastin  
endothelin 1  
fibroblast growth factor inducible 14  
fibulin 2  
FK506 binding protein 7 (23 kDa)  
growth arrest specific 6  
H3 histone, family 3B  
heat shock 27 kDa protein 2  
heparin binding epidermal growth factor-like growth factor  
HIV type I enhancer binding protein 1  
hypoxia inducible factor 1α  
insulin-like growth factor binding protein 7  
integrin β5  
lipocalin 7  
LPS-induced TN factor  
lysyl oxidase  
metallothionein 1  
myomesin 2  
myosin light chain, alkali, cardiac atria

nestin  
NIMA-related kinase 7  
nuclear protein 1  
PDZ and LIM domain 3  
peptidylprolyl isomerase C  
peroxiredoxin 4  
phosphatidylinositol-4-phosphate 5-kinase, type 1 α  
phosphofructokinase, platelet  
phospholipase A2, group IVA  
procollagen, type V, α2; type VIII, α1  
proline 4-hydroxylase, α1  
prolyl 4-hydroxylase, β polypeptide  
prostaglandin I2 (prostacyclin) synthase  
quaking  
ras homolog gene family, member J  
RAS p21 protein activator 3  
reefin  
Rho-associated coiled-coil forming kinase 2  
ribonuclease, RNase A family 4  
RNA polymerase I associated factor, 53 kD  
S100 calcium binding protein A8 (calcyclin)  
sarcoglycan, β  
scavenger receptor class B, member 2  
serpin, clade E, members 1, 2  
serpin, clade F, member 1  
SH3-binding domain glutamic acid-rich protein like  
spermidine/spermine N1-acetyl transferase  
thrombospondin 1  
tissue inhibitor of metalloproteinase 3  
transforming growth factor, β1  
tropomodulin 1, skeletal, slow 1  
vascular cell adhesion molecule 1  
WW domain-containing protein 4

## REPRESSSED SYNERGISTICALLY BY CYCLIN T1 + GQ:

3-oxoacid CoA transferase  
acetyl-Coenzyme A dehydrogenase, short chain  
aldo-keto reductase family 1, member B7  
alpha-methylacyl-CoA racemase  
branched chain ketoacid dehydrogenase E1, β  
carnitine palmitoyltransferase 2  
citrate synthase  
creatine kinase, muscle  
cyclin-dependent kinase inhibitor 1C (P57)  
DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 16  
dihydrofattyamide branched chain transacylase E2  
dihydrofattyamide dehydrogenase  
dihydrofattyamide S-acetyltransferase precursor  
dodecanooyl-Coenzyme A delta isomerase  
electro transfering flavoprotein, α  
enoyl coenzyme A hydratase 1, peroxisomal  
FK506 binding protein 4 (59 kDa)  
G elongation factor  
gap Junction membrane channel protein α1  
GrpE-like 1, mitochondrial  
heat shock 10 kDa protein 1 (chaperonin 10)  
heat shock protein, 60 kDa  
inner membrane protein, mitochondrial

interferon activated gene 203  
interferon activated gene 204  
isocitrate dehydrogenase 3 (NAD+) α  
isocitrate dehydrogenase 3 (NAD+) γ  
mitochondrial ribosomal protein L12  
mitochondrial ribosomal protein L3  
NADH dehydrogenase (ubiquinone) flavoprotein 2  
peroxiredoxin 3  
phospholipid transfer protein  
phytanoyl-CoA hydroxylase  
potassium voltage-gated channel, Shal-related family,  
Programmed cell death 8  
proteasome (prosome, macropain) 28 subunit, α  
retinoid X receptor γ  
secreted modular calcium binding protein 2  
septin 4  
sialyltransferase 8 (alpha-2, 8-sialyltransferase) D  
succinate dehydrogenase complex, subunit A  
succinate-Coenzyme A ligase, ADP-forming, β subunit  
succinate-Coenzyme A ligase, GDP-forming, β subunit  
tetranectin (plasminogen binding protein)  
transcription elongation factor A (SII), 3  
translocator of inner mitochondrial membrane 44

12/15

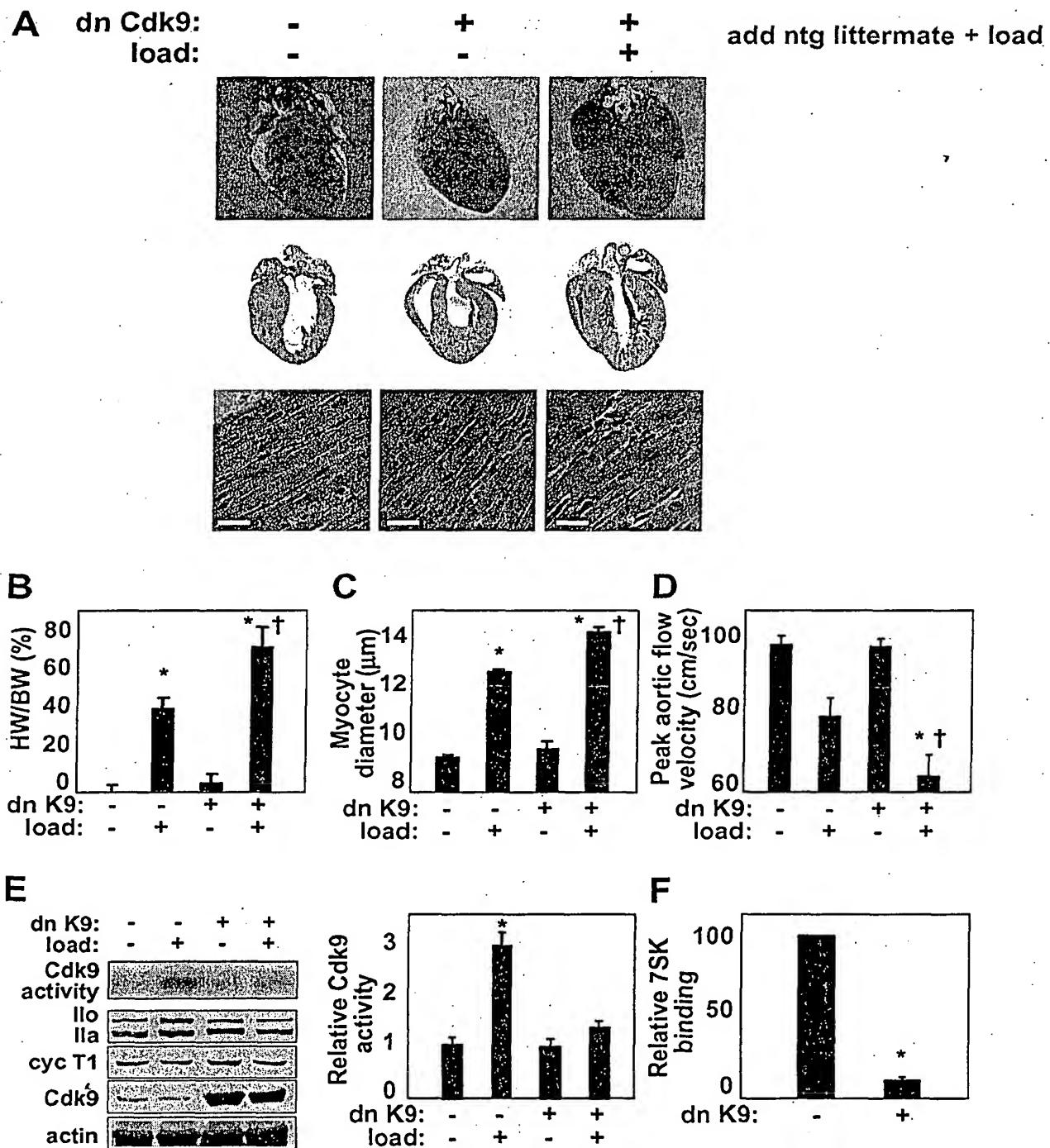


FIG. 8

13/15

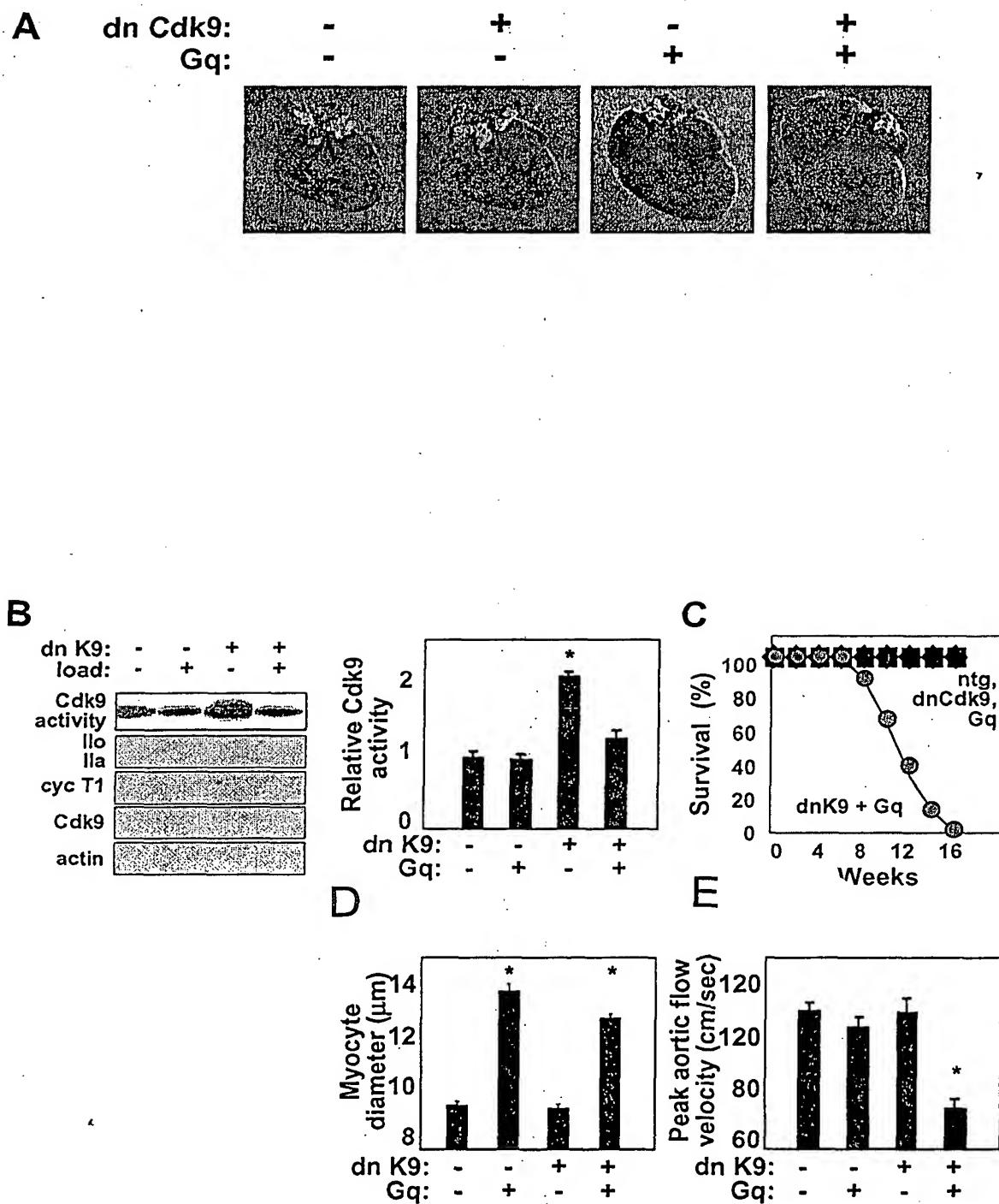


FIG. 9

# 14/15

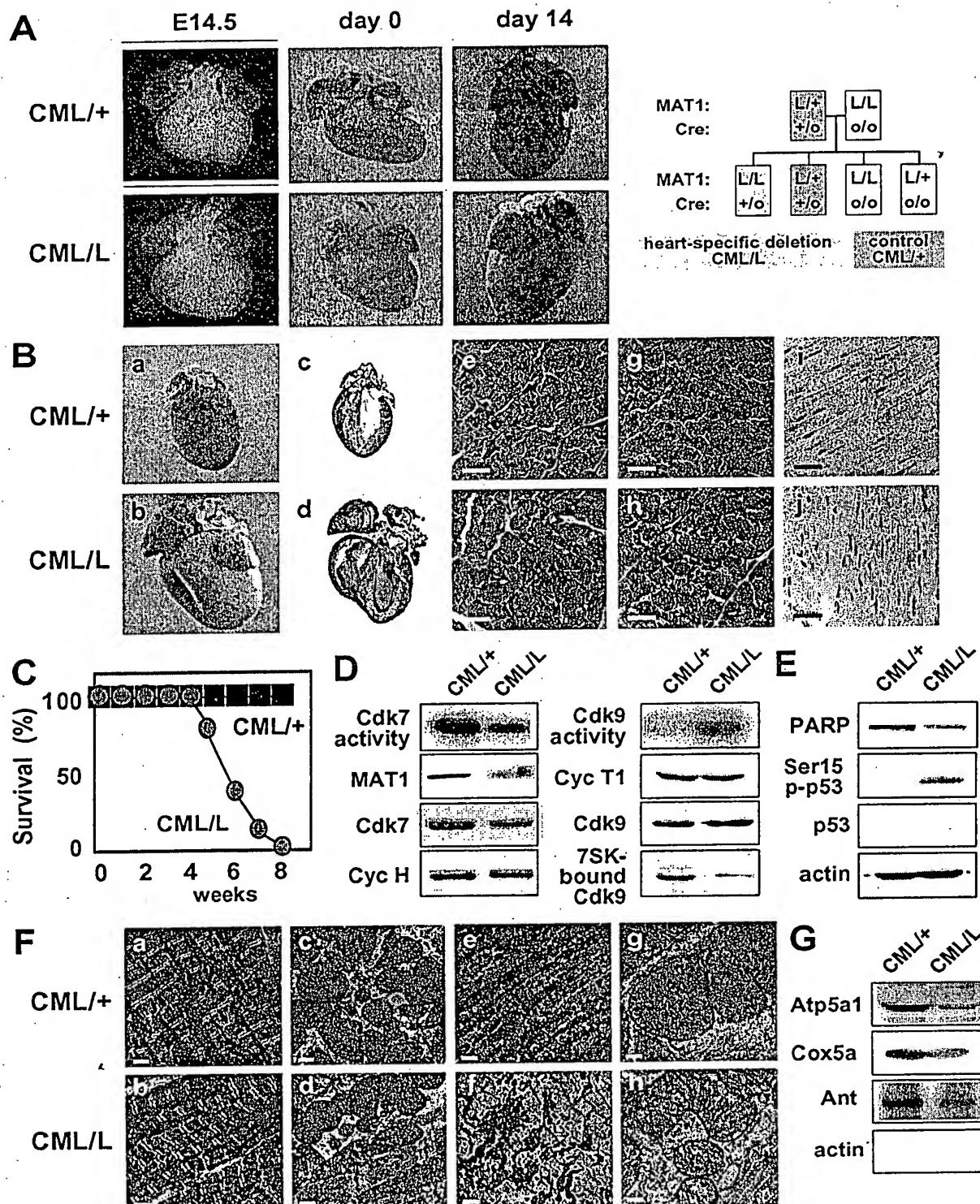
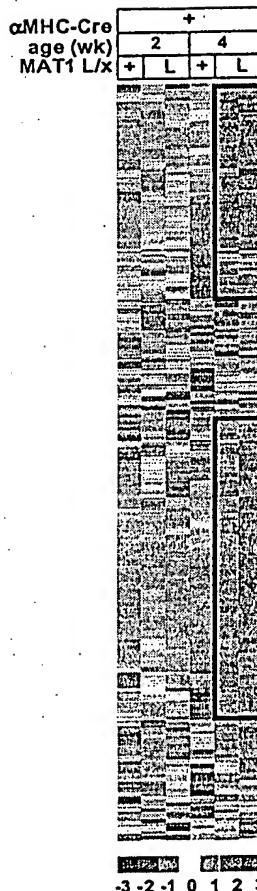


FIG. 10



## REPRESSSED AT 4 WK BY CARDIOMYOCYTE-SPECIFIC DELETION OF MAT1:

3-oxoacid CoA transferase	lipin 1
acetyl-Coenzyme A dehydrogenase, short chain	lipocalin 7
BCL2/adenovirus E1B 19 kDa-interacting protein 1, NIP3	metal response element binding transcription factor 2
bone morphogenic protein 7	metallothionein 1
branched chain ketoacid dehydrogenase E1, beta	methylnalonyl-Coenzyme A mutase
cadherin 13	mitochondrial ribosomal protein L12
calcium channel, voltage-dependent, T type, alpha 1G	mitochondrial ribosomal protein L34
carnitine deficiency-associated gene expressed in ventricle 1	myeloid leukemia factor 1
catechol-O-methyltransferase	myomein 2
cilrate synthase	NADH dehydrogenase (ubiquinone) flavoprotein 2
clut-like 1 (Drosophila)	p300/CBP-associated factor
cytochrome c oxidase, subunit VIIa 1	peroxiredoxin 3
DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 16	phosphofructokinase, liver, B-type
deleted in polyposis 1	phospholipid transfer protein
dihydrolipoamide branched chain transacylase E2	phytanoyl-CoA hydroxylase
dihydrofolate dehydrogenase	plasma membrane associated protein, S3-12
dodecenoyl-Coenzyme A delta isomerase	potassium voltage-gated channel, Shal-related family, 2
electron transferring flavoprotein, alpha	programmed cell death 8
enoyl Coenzyme A hydratase 1, peroxisomal	prohibitin
enoyl Coenzyme A hydratase, short chain, 1, mitochondrial	prostaglandin D2 synthase (21 kDa, brain)
fibroblast activation protein	proteasome (prosome, macropain) 28 subunit, alpha
FK506 binding protein 4 (59 kDa)	RAF quinone nucleotide release factor
four and a half LIM domains 2	retinoid X receptor gamma
fumarate hydratase 1	sequenator 1
G elongation factor	stathmin/taufractase 8 (alpha-2, 8-galactyltransferase) D
gap junction membrane channel protein alpha 1	stathmin/alpha-1-Coenzyme A hydratase, beta subunit
heat shock 10 kDa protein 1 (chaperonin 10)	stt103 (silent mating type information regulation 2, homolog) 3
heat shock protein, 60 kDa	succinate dehydrogenase complex, subunit A
histidine rich calcium binding protein	succinate-Coenzyme A ligase, GDP-forming, beta subunit
intereron activated gene 203	thyroid hormone responsive SPOT14 homolog (Rattus)
isiquoila related homeobox 3 (Drosophila)	transcription elongation factor, beta induced, 68 kDa
isocitrate dehydrogenase 3 (NAD+) alpha	translocator of inner mitochondrial membrane 44
isocitrate dehydrogenase 3 (NAD+), gamma	ubiquinol-cytochrome c reductase core protein 1
isovaleryl coenzyme A dehydrogenase	vascular endothelial growth factor B
kit ligand	

## INDUCED AT 4 WK BY CARDIOMYOCYTE-SPECIFIC DELETION OF MAT1:

28S proteasome-associated pad1 homolog	matrix gamma-carboxyglutamate (gla) protein
5' nucleotidase, ecto	mosin
a disintegrin and metalloproteinase domain 9	myosin, heavy polypeptide 7, cardiac muscle, beta
actinin, alpha 1	myotrophin
acyl-Coenzyme A thioesterase 2, mitochondrial	nestin
acyl-Coenzyme A thioesterase 3, mitochondrial	neururin
aldehyde dehydrogenase family 1, subfamily A1	Niemann-Pick type C2
annexin A1	NS1-associated protein 1-like
annulin A3	nuclear cap binding protein subunit 2, 20kDa
arladino homolog 2 (Drosophila)	nuclear factor I/X
arlycan	nuclear protein 1
catenin and Integrin binding 1 (calmyrin)	ornithine decarboxylase antizyme inhibitor
cardiac morphogenesis	osteoblast specific factor 2 (fasciclin I-like)
casein kinase 1, delta	paroxonase 2
CD34 antigen	PDZ and LIM domain 3
CD63 antigen	phosphofructokinase, platelet
CD81 antigen	phosphatidylinositol transfer protein, beta
chaperonin subunit 8 (theta)	polypryimidine tract binding protein 2
chloride intracellular channel 4 (mitochondrial)	procollagen C-proteinase enhancer protein
chondroitin sulfate proteoglycan 2	procollagen, type I, alpha 2
coagulation factor II (thrombin) receptor	procollagen, type IV, alpha 5
connective tissue growth factor	procollagen, type V, alpha 2
CREBBP/EP300 inhibitory protein 1	procollagen, type VIII, alpha 1
cyclin-dependent kinase inhibitor 1A (P21)	programmed cell death 6 interacting protein
cysteine rich protein	prolyl 4-hydroxylase, beta polypeptide
cysteine rich receptor-like factor 1	prostaglandin I2 (prostacyclin) synthase
cysteine T-lymphocyte-associated protein 2 alpha	protein phosphatase 1A, Mg dependent, alpha
DEAD/H box polypeptide 50	protein tyrosine phosphatase, non-receptor type 21
delodinase, iodothyronine, type II	quaking
diaphorase 1 (NADH)	ras homolog gene family, member J
dihydropyrimidinase-like 3	RAS p21 protein activator 3
elastin	reelin
enabled homolog (Drosophila)	retinol binding protein 1, cellular
epidermal growth factor pathway substrate 15	RNA binding motif protein 4
epithelial membrane protein 1	RNA polymerase I associated factor, 53 kD
fibulin 2	S100 calcium binding protein A10 (calpastatin)
folistatin-like	S100 calcium binding protein A11 (calzatatin)
four and a half LIM domains 1	S100 calcium binding protein A13
glutamine synthetase	S100 calcium binding protein A6 (calcyclin)
glutathione peroxidase 3	secreted modular calcium binding protein 2
glycogenin 1	serpin, clade B, member 6
granulin	serpin, clade E, member 1
GrpE-like 1, mitochondrial	serpin, clade E, member 2
H3 histone, family 3B	serpin, clade F, member 1
heat shock 27kD protein 2	serine protease inhibitor 6
heat shock 70 kDa protein 4	serine/threonine kinase 2
heparin-binding epidermal growth factor	sialyltransferase 10
histone H3	sind associated polypeptide, 30kD
HIV-1 Rev binding protein	Son of sevenless homolog 1, (Drosophila)
hypoxia inducible factor 1, alpha subunit	spermidine/spermine N1-acetyl transferase
IK cytoline	sphingosine phosphate lyase 1
Inhibitor of DNA binding 2	talin
Insulin-like growth factor binding protein 7	thrombospondin 1
Insulin-like growth factor I receptor	tissue factor pathway inhibitor
Integrin alpha 5 (fibronectin receptor alpha)	tubby like protein 4
Integrin beta 4 binding protein	tubulin, alpha 1
Integrin beta 5	tubulin, beta 2
Integrin linked kinase	ubiquillin 1
Intereron-related developmental regulator 1	ubiquitin carboxyl-terminal esterase L5
famin A	ubiquitin carboxy-terminal hydrolase L1
low-density lipoprotein receptor-related protein 10	UDP-glucose dehydrogenase
LPS-induced TN factor	uridine-cytidine kinase 2
lysyl oxidase	

FIG. 11